



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

APR 24 2000

400 Seventh Street, S.W.
Washington, D.C. 20590

Christopher R. Adams
Assistant Vice President
FIBA Technologies, Inc.
PO Box 897
Westboro, MA 001581

Dear Mr. Adams:

Enclosed is a copy of DOT-E 9419 (SEVENTH REVISION). This exemption was revised to add paragraphs 8(g), (h), (i) and remove Appendix A.

If you have any questions, please do not hesitate to contact this office at (202) 366-4535.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Ryan Posten', with a stylized flourish at the end.

R. Ryan Posten
Exemptions Programs Officer
Office of Hazardous Materials
Exemptions and Approvals

Enclosure



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400 Seventh Street, S.W.
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DOT-E 9419
(SEVENTH REVISION)

EXPIRATION DATE: December 31, 2001

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: FIBA Technologies
Westboro, MA
2. PURPOSE AND LIMITATION: This exemption authorizes the transportation in commerce of certain gases in limited quantities of DOT 3AAX or 3T cylinders that are retested by means other than the hydrostatic retest required in § 173.34(e). This exemption provides no relief from any Hazardous Materials Regulation (HMR) other than as specifically stated herein.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.34(e), introductory paragraph, the table, and paragraphs (1), (3), (4) and (6); and § 173.302(c) (2), (3) and (4).
5. BASIS: This exemption is based on the application of FIBA Technologies dated November 10, 1999, submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous materials description -- proper shipping name	Hazard Class/ Division	Identi- fication Number	Packing Group
The various flammable and non- flammable gases authorized in DOT 3AAX and 3T specification cylinders	as appro- priate	as appro- priate	n/a

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7. SAFETY CONTROL MEASURES:

a. Packaging prescribed is a DOT 3AAX or 3T cylinder, mounted on a tube trailer vehicle chassis or a tube module equipped with an ISO frame. The cylinder must have a minimum wall thickness of not less than 0.400 inch. Each cylinder must be retested and accepted in accordance with the test procedure specified in the application and as prescribed in this exemption, in place of that prescribed in § 173.34(e).

b. The signal processor threshold level must be set at not greater than 32 dB. Each acoustic emission (AE) site on the cylindrical portion of each tube which produces five or more valid events within an 8 inch axial distance must be subjected to an ultrasonic inspection. Each AE site on tube ends (i.e., sections of the tube which lie outboard of the sensors) which produces five or more events which hit both sensors and which had 43dB or greater peak amplitude at the "first hit" sensor must be subjected to an ultrasonic inspection. Recording of AE data must start when tube pressure reaches the lesser of 1,000 psig or 60 percent of normal fill pressure, and end when cylinder pressure reaches the greater of 110 percent of either the marked service pressure or allowable fill pressure.

c. Each person who performs retesting in accordance with the AE test procedure authorized by this exemption must be a "qualified tester". The term "qualified tester" used in this exemption means a person who meets either paragraph 7.c.(1) or 7.c.(2) of this exemption.

(1) A person who holds an engineering degree from an accredited college or university and has at least:

(i) 5 years continuous experience in: (A) the design, fabrication, maintenance, testing and inspection of DOT specification cylinders or of pressure vessels; (B) metallurgy; or (C) non-destructive testing of pressure vessels, or any combination thereof; and

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(ii) 50 hours of experience in AE testing of pressure vessels or DOT specification cylinders; and

(iii) 20 hours of experience in ultrasonic testing in accordance with the method specified in ASTM A-388-67.

(2) A person who performs such testing under the general supervision of one qualified under paragraph c (1) above (whether or not at the same location). Such person must have:

(i) (A) at least 5 years continuous experience of a technical nature involving DOT specification cylinders or pressure vessels; or (B) successfully completed at least 10 semester hours of a scientific or technical curriculum and has at least 2 years continuous experience of the same technical nature; and

(ii) received at least (A) 40 hours of training or instruction in AE testing of pressure vessels or DOT specification cylinders and must have at least 80 hours of experience in such testing under the personal supervision of a person qualified under paragraph c (1) above; (B) 40 hours of training or instruction in ultrasonic testing; and (C) 10 additional hours of experience in such testing under the direct, personal supervision of a person qualified under paragraph c (1) above.

8. SPECIAL PROVISIONS:

a. Cylinders retested in accordance with paragraph 7 above may be charged to 110 percent of marked service pressure in accordance with § 173.302(c).

b. A statement of qualifications, for each "qualified tester" used under this exemption and information in support thereof, must be maintained by FIBA. The location of this statement, for each "qualified tester", must be identified to the Office of Hazardous Materials Exemptions and Approvals(OHMEA).

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c. The exterior of the trailer cabinet of the vehicle chassis to which the cylinders are affixed must be marked with letters at least 2 inches high on a contrasting background "DOT-E 9419".

d. An exterior tube on each side of a tube module must be marked with letters at least 2 inches high on a contrasting background "DOT-E 9419".

e. The current retest date must be marked on the rear bulkhead inside the trailer cabinet at approximately eye level above the withdrawal valve for tube trailers and on the bulkhead near the withdrawal valve for tube modules. In the event retest dates of cylinders differ in a trailer cluster, the retest date displayed will be that of the oldest retest date, meaning the date of the retest that must occur first.

f. The quantity of cylinders retested in accordance with paragraph 7 above must not exceed 600 annually for FIBA Leasing and its affiliated business entities collectively and not severally.

g. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this exemption for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this exemption.

h. A person who is not a holder of this exemption, but receives a package covered by this exemption, may reoffer it for transportation provided no modifications or changes are made to the package and it is offered for transportation in conformance with this exemption and the HMR.

i. A current copy of this exemption must be maintained at each facility where the package is requalified or offered for transportation.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and cargo vessel.

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried on each motor vehicle or cargo vessel used to transport packages covered by this exemption.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The following information must be reported to OHMEA:

- a. The name of each person qualified to conduct testing under Paragraph 7.c., before use as a "qualified tester".
- b. Location of each facility where testing under this exemption is conducted.
- c. A report on the first test and a report each 6 months thereafter indicating the number of cylinders tested under this exemption and identification by serial number of those passing and those failing to pass the test authorized by this exemption. Specifically, each report must include at least the following information:

- (1) DOT specification number.
- (2) Maximum allowable filling pressure.
- (3) Minimum prescribed sidewall.
- (4) Number of events at each location.
- (5) Pressure associated with each event.

- (6) Description of each AE event (amplitude, duration, energy, etc.)
- (7) Size of each defect measured (length and depth).
- (8) Type of each defect measured (crack, pitting, etc.).
- (9) Defect location relative to each sensor.
- (10) Defect location relative to sidewall (interior, outer surface, inner surface).

d. Any incident involving loss of contents of the package must be reported by the shipper to the OHMEA as soon as practicable. The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incidents involving the package and shipments made under the terms of this exemption.

Issued at Washington, D.C.:



RA Robert A. McGuire
Acting Associate Administrator
for Hazardous Materials Safety

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(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.

Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

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